

REMARKS/ARGUMENTS

Claims 1-18 were pending in this application. Claims 14-16 have been canceled. Claims 1-4, 7-13 and 17-18 have been amended. No new matter is added.

In the Office Action, claims 1-7 and 10-18 were rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the written description requirement. Claims 1-18 were rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite on various grounds. These rejections are addressed below.

The Rejections of Claims 1-7 and 10-18 under 35 USC 112

Claims 1-7 and 10-18 were rejected under 35 U.S.C. §112, first paragraph as allegedly lacking written description, and under 35 U.S.C. §112, second paragraph as allegedly indefinite. The Office Action alleged that "the specification fails to state that all or any known FETL compounds is/are applicable in the invention" and therefore the specification did not adequately support the claims, and that FETL is a critical element of the invention. These rejections are traversed or otherwise addressed below.

Claim 1 has been amended to recite the exact language found in the description of FETL in the specification in paragraph 11, page 3, and in paragraph 113 (bottom page 33) and claims 2 and 12 as filed:

FETL is a fluorescence energy transfer linker comprising a symmetric, rigid or sterically hindered, divalent moiety joined to D1 and D2 via an amine, carbonyl, activated carboxylic acid ester, disulfide, thiol or thiol ester.

This definition is clear and definite. One of skill would understand from this definition the scope of the invention without difficulty. Furthermore, the electronic file history of this application reflects that a structural search has been carried out, indicating that a sufficient structural core has been found in the claims for one of skill to determine whether they are infringing the claim.

The particular structure of the FETL is not a critical feature of the broadest scope of the invention, and was nowhere described as such in the application. While certain novel linkers are disclosed, applicants are in no way limited to their preferred or working embodiments. FETL1-4 are described as simply examples of suitable FETL's. As set forth in paragraph 13, "[t]he fluorescence energy transfer linkers (FETL) of the invention include those represented by the formulae" FETL1, FETL2, FETL3 and FETL4. Emphasis added. "Include" is open language, allowing for other alternatives. See also paragraph 70, with similar language. See also paragraphs 107 and 108, describing preferred embodiments as including those where FETL was FETL1, FETL2, FETL3, and FETL4.

As the specification clearly sets forth the definition of FETL as recited in the claim, and as this definition is clear and definite, withdrawal of the rejections of the claims under 35 USC 112 on the basis of the definition of FETL is respectfully requested.

The Indefiniteness rejections

Claims 1-18 were rejected under 35 U.S.C. §112, second paragraph as allegedly indefinite on various grounds. This rejection is traversed or otherwise addressed below. The rejection on the basis of the definition of FETL is addressed above.

Claim 18 (claim 8 is believed to be intended) was said to recite FETL1-4, having substituents such as "D1-R10", wherein "R10 is D1-C(O)-". Claims 8-9 were said to be confusing as to how many D1's were present. Applicants note that D1 is set forth in bold italics in both instances. Paragraph 76 states that bold italics are employed in the specification and claims to indicate a connection to a species that does not actually form a part of the recited structure. Nevertheless, claims 8-9 have been amended to remove the additional recitations of linkages to D1 and D2. Withdrawal of this rejection is requested.

Claim 10 was said to be indefinite for recitation of "An compound." Claim 10 has been amended as requested. Withdrawal of the rejection is respectfully requested.

Claims 13-14 were said to have no relationship between measurement of D2 emission and the purpose of the assay. Claim 13 has been amended to more clearly recite the relationship of D2 emission to the assay purpose. Claim 14 has been cancelled without prejudice.

Claims 15-18 were said to be "'proximate assay' but as written there is no relationship between measurement of reporter dye emission and the 'proximity' in line 1" and was said to not state how the proximity is determined. Claims 15-16 have been cancelled rendering that rejection moot. The proximity assay relies on the transfer of energy from an excited state of the donor and receptor dyes, relying on the well-known and well-characterized phenomenon of fluorescence energy transfer. An extensive discussion of this is given in the specification at paragraph 9 and elsewhere. This is also discussed in the definition of "spatially proximate" in the specification at paragraph 60. This distance is within about 100 Angstroms or less. The proximity is determined by the ability of the dyes to transfer energy, which is determined by the proximity of the target sites to which they bind in the recited assay. Nevertheless, claims 17-18 have been amended to explicitly recite that emission from the reporter dye indicates proximity of the reporter dye and the donor dye. Withdrawal of this grounds of rejection is respectfully requested.

CONCLUSION

It is respectfully asserted that the application is believed to be in condition for allowance, and early notice to that effect is requested. Should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

Please charge any additional fees, or credit overpayment to Deposit Account No. 06-1135, matter 8143-81923.

Respectfully submitted,

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